

CLAIM(S)

What is claimed is:

1. Aramid paper comprising 50 to 95 weight percent p-aramid
5 pulp and 5-50 weight percent of floc with an initial modulus less than 3000
cN/tex.
2. The aramid paper of claim 1, wherein p-aramid pulp is poly
(p-phenylene terephthalamide) pulp.
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3. The aramid paper of claim 1, wherein the floc is meta-
aramid.
4. The aramid paper of claim 3, wherein the meta-aramid floc is
15 poly (m-phenylene isophthalamide) floc.
5. The aramid paper of claim 1, comprising a polymer binder
material in the quantity of less than 20 weight percent based on the
weight of the total composition.
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6. The aramid paper of claim 5, wherein at least a portion of the
polymer binder material is in the form of fibrils.
7. The aramid paper of claim 6, wherein the fibrils are made
25 from poly (m-phenylene isophthalamide).
8. The aramid paper of claim 5, wherein the polymer binder can
be fused by one of the group consisting of drying and calendering.
9. The aramid paper of claim 5, wherein at least a portion of the
30 polymer binder material is a resin binder material, which can be fused
during drying or calendering of the paper.

10. The aramid paper of claim 9, wherein at least a portion of the resin binder material is thermoplastic floc.
11. The aramid paper of claim 9, wherein at least a portion of the resin binder material is a water-soluble resin.
12. The aramid paper of claim 1, wherein the basis weight of the paper is less than 70 g/m².
13. The aramid paper of claim 1 or 5, wherein the absolute value of the coefficient of thermal expansion of the paper in plane in the temperature interval between 20 and 100°C is less than 4 ppm/C.
14. The aramid paper of claim 1 or 5, comprising 70 to 95 weight percent p-aramid pulp.
15. A printed wiring board, comprising one or more layers of the paper of claim 1 or 5.
16. An electrical insulating material, comprising one or more layers of the paper of claim 1 or 5.
17. A composite structure, comprising the aramid paper of claim 1 or 5 impregnated with a resin.
18. The composite structure of claim 17, wherein the resin is a phenol.
19. A printed wiring board or electrical insulating material, comprising the composite structure of claim 17.
20. A structural material, comprising the aramid paper of claim 1 or 5.

21. The structural material of claim 20, wherein the aramid paper is incorporated into the cells of a honeycomb structure.

22. The structural material of claim 20, wherein the aramid paper is incorporated into the facing of a sandwich panel.

23. A process of making aramid paper, comprising the steps of
dispersing p-aramid pulp in water
blending the pulp/water slurry with a floc having an initial
modulus less than 3000 cN/tex wherein the weight percent of the pulp and
the floc in the solids is from 50 to 95 and from 5 to 50 respectively,
draining the water from the final slurry to yield a wet paper
composition,
drying the wet paper composition.

24. The process of claim 23, comprising a step of wet pressing of the wet paper composition before drying.

25. The process of claim 24, comprising heat-treating the paper after drying.

26. The process of claim 23, comprising a step of adding a polymer binder material in a quantity less than 20 weight percent of the total solids after blending the pulp/water slurry with the floc.

27. The process of claim 26, comprising heat-treating the paper after drying.

28. The process of claim 23, comprising densification of the dried paper.

29. The process of claim 28, wherein densification is performed by selecting one of the group consisting of application of pressure in the nip of a calender and application of pressure in a press.

30. The process of claim 28, comprising a step of heat-treating the paper after densification.